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TUBERCULOMA OF THE PONS VAROLII; PULMONARY TUBERCULOSIS IN A BOY, AGED 3½ YEARS. DEATH, NECROPSY, REMARKS.

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A BOY, aged 3½ years, was admitted on February the 2nd, 1915, at Paddington Green Children's Hospital on account of paralysis of the sixth and seventh cranial nerves on the left side, weakness of legs, and signs of consolidation of the apex of the left lung.

History of previous illness.—About Christmas, 1914, he was confined to bed for a fortnight with bronchitis and pneumonia. On getting up, his legs were very weak, but by holding on to things he could walk a little. A squint in the left eye was noticed ten days before admission. His appetite had been poor, but he swallowed without difficulty and had no regurgitation through the nose nor vomiting. He was losing flesh, and his cheeks were often flushed. A cough which he had had "off and on since birth" had become worse. He made no complaint of headache or pain of any kind.

Previous history.—Whooping cough when a baby; measles and bronchitis at two years.

Family history.—Father, aged 32 years, mother, aged 29 years;

both healthy. Four children living. (1) F—, aged 7 years, healthy. (2) M—, aged 5 years. Now in hospital suffering from tuberculous consolidation of apex of left lung and serous pleuritic effusion. (3) Patient. (4) M—, aged $1\frac{1}{4}$ years (died of "bronchitis" whilst patient was in hospital). Two other children died of bronchitis in infancy.

Condition on admission.—A thin, feeble child, with dusky flush on cheeks, extremities cold and blue. Dull and apathetic, but quite

FIG. 1.

intelligent. Temperature 101° F., pulse 138, respiration 48, regular, not laboured nor pneumonic in character. Cough frequent and paroxysmal. When sitting up, the chin constantly deviated towards the left side, and the head inclined towards the right shoulder (*vide* Fig. 1).

Eyes.—Pupils, optic discs and fundi normal. No tubercles.

Oculo-motor nerves.—Complete paralysis of left sixth nerve. Eyeball strongly turned inwards. No outward movement beyond midline. Power of inward movement of right eye was also lessened.

Face.—Complete paralysis of left side. Left eye could not be closed, and the left side of face and mouth remained immobile, and

the mouth was drawn to the right when the child smiled. No loss of sensation on either side of face. The tongue was protruded straight. Soft palate moved normally. Hearing was unaffected. Apparently only the left sixth and seventh cranial nerves were paralysed.

Upper extremities.—No apparent weakness nor hypotonia, nor tremors, nor ataxy. Tendon jerks not exaggerated.

Lower extremities.—Movements free, no spasticity nor hypotonia. Knee-jerks active, rather more so on the right side. Ankle clonus absent. Plantar responses sluggish and flexor in type. The child's general weakness made it inadvisable to test powers of equilibrium, standing and walking.

Lymphatic system.—Tonsils enlarged, and also slight enlargement of posterior cervical, axillary and femoral glands.

Chest, anteriorly.—Percussion note dull at left apex as far as third rib. Breath-sounds over this area almost amphoric in character and accompanied by loud coarse *râles.*

Posteriorly.—Many *râles* heard at both bases, but no areas of dulness nor signs of consolidation present.

Heart.—Normal.

Abdomen.—Normal.

Von Pirquet's test gave markedly positive reaction.

Course of illness.—Until death, six weeks after admission, the child lost weight, but otherwise only slight changes were noted in his general condition. The temperature remained normal or subnormal with occasional rises to 100° F. or 101° F. Respiration varied between 20 and 40, and pulse-rate from 80–130. The dulness of the left apex of the lung and signs of consolidation became much less intense, but scattered *râles* were always audible throughout the lungs. He took his food well and did not vomit nor complain of headache.

He was a quiet, taciturn child, but answered questions sensibly, and took a languid interest in his toys, especially a small cannon with which he proposed to shoot the Kaiser.

The characteristic " cerebellar " inclination of the head to the right shoulder and deviation of the chin to the left side remained constant, and also the paralysis of the left face and left external rectus. About three weeks after admission slight vertical nystagmus was noted, and a fortnight later he appeared to be insensitive to fairly sharp pin pricks all over the trigeminal area on both sides. No signs of implication of other bulbar nerves were discovered, nor was there any evidence of involvement of the descending motor tracts.

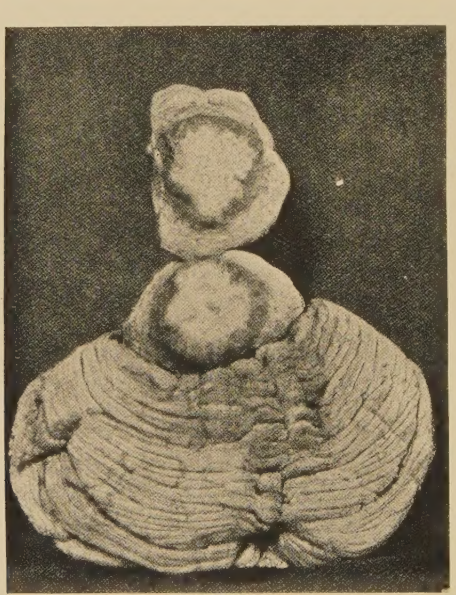
Owing to his general weakness he was not allowed out of bed until March the 21st, when he was able to walk unsteadily with a little assistance and showed a tendency to fall towards the right side.

That evening he was seized with general convulsions, and died five hours later.

Post-mortem Examination (Mr. Herbert Perkins).

A fairly well nourished boy. Rigor mortis present.

Fig. 2.



Brain.—On removal nothing pathological was detected except, perhaps, some broadening of the pons Varolii. There was no evidence of meningitis.

On section, however, the pons was found to be occupied in its centre by a tuberculous mass about one inch in diameter (*vide* Fig. 2). The outline of the mass was roughly circular. It was of a yellow-green colour surrounded by a somewhat raised congested border. The mass was not quite central in the pons, but was situated rather more to the left of the centre than the right.

Histologically, the tuberculous focus was found to be much more diffused than the macroscopic appearance indicated. None of the pontine nuclei or nerves could be identified.

As the brain was removed from the base of the skull, a small tumour, about the size of a cherry, was left behind, loosely attached to the cribriform plate of the ethmoid. It was of a dark red colour; its centre on section was soft and caseating. Two or three similar masses were found just beneath the cortex on the frontal lobes; apparently arising in the infolded pia mater. They were but loosely connected with the brain substance. The cerebellum was free of such foci of infection. The ventricles were not distended.

Tongue, larynx, trachea were normal.

Pleuræ and *lungs*.—Throughout the lungs many miliary tubercles were found scattered. There was some fibrosis at the left apex with dilatation of the bronchioles. The bronchial glands were enlarged, pale, and soft, but not obviously caseating, although distinctly tuberculous. A few tubercles were found on the pleural surface.

Heart and pericardium normal.

Spleen.—A few tubercles were present on the surface. The remaining abdominal organs appeared normal.

The abdominal glands were not enlarged nor did they appear tuberculous.

Remarks.

It seems strange that a tumour involving the greater part of the pons and almost centrally placed should have affected so few of the cranial nerves, and these almost entirely on the left side, and also that signs of implication of the pyramidal tracts were limited to slight exaggeration of the knee-jerk on the right side.

The explanation is that the tumour originated in the left side of the pons, involving the sixth and seventh nuclei and origin of the nerves, but in its growth displaced rather than destroyed surrounding structures. Involvement of the left cerebello-pontine peduncles was shown by the tendency to fall to the right, and by the pose of the head which was inclined towards the right shoulder, whilst the chin pointed in the opposite direction. This characteristic "cerebellar attitude," together with the complete paralysis of left sixth and seventh nerves, was suggestive of a tumour in the left cerebello-pontine angle. But, apart from the rarity of tumours in this position in young children, the fact that the auditory nerve escaped damage, the weakness of inward movement in the right eye (conjugate deviation) showed that the nucleus of the sixth nerve was involved and not the extra-medullary portion of the nerve alone;

whilst the bilateral analgesia of the trigeminal area, which was noted some days before death, pointed to an intra-pontine and not an extra-pontine lesion. The vertical nystagmus was attributable to disturbance of the cerebello-pontine connections.

Death was due to a primary attack of convulsions, probably dependent upon failure of respiratory centres in the medulla, for no cause in the shape of meningitis was found post mortem ; and the amount of miliary tuberculosis of the lungs was not in itself sufficient to be fatal. At least, it was by no means so extensive as in children who have died from this cause alone.

Although pulmonary tuberculosis was found, it was not the cause of death, and therefore the physical signs noticed during life are worthy of comment in the light of the post-mortem appearances.

Six weeks before death, signs of consolidation of the whole of the left apex ; namely, dulness on percussion as far as the third rib, respirations almost amphoric and numerous coarse *râles* were noted. But gradually these physical signs became less marked, until, a few days before the child died, only impairment of resonance, some crepitations and harsh breath-sounds below the left clavicle remained.

The post-mortem condition of the left apex, namely, some " fibrosis, with dilatation of the bronchi " was quite consistent with the latter, but not with the earlier physical signs of consolidation.

The case therefore raises the following points for discussion :

Was this consolidation present six weeks before death produced by tuberculous infiltration or by a passing broncho-pneumonia of the left apex of the lung to which miliary tuberculosis was secondary ?

The latter view will probably find more general acceptance, yet there is nothing inherently improbable in the supposition that massive tuberculous infiltration of the apex underwent resolution, leaving behind only fibrosis and shrinking of the pulmonary tissues. Similar resolution is known to take place in tuberculosis of the peritoneum.

The diagnosis of pulmonary tuberculosis in early childhood is admittedly difficult. It is a common experience to find the lungs packed throughout with miliary tubercles which during life have given rise to no physical signs except those of slight bronchial catarrh. *Per contra* it is equally common to find nothing but broncho-pneumonia in cases in which the physical signs and clinical course have suggested tuberculosis.

The knowledge that pulmonary tuberculosis in early life is almost invariably miliary in type, and practically in all cases due to

dissemination from tuberculous thoracic glands, is of little help, considering that neither miliary tubercles nor tuberculous bronchial glands (unless of considerable size) produce any reliable physical signs of their presence.

The streaks and shadows shown by X-ray photographs are not as yet capable of exact interpretation, nor can reliance be placed upon von Pirquet's and other tests. The discovery of tubercle bacilli in the sputum will render the diagnosis certain, but this discovery is rarely made.

It must therefore be admitted that in young children the diagnosis of pulmonary tuberculosis is only rendered certain by post-mortem examination. But it does not follow that the diagnosis is wrong merely because physical signs disappear and the patient recovers.

Yet many physicians on such grounds are perhaps too ready to conclude that the diagnosis must have been incorrect, and are inclined to be sceptical as regards statistics which purport to show the wide prevalence of pulmonary tuberculosis in young children. One may be sceptical as regards the evidence afforded by physical signs in such cases, yet it is by no means improbable that many infants and young children may recover from repeated attacks of miliary tuberculosis of the lungs which at the time have been diagnosed as bronchitis or broncho-pneumonia.

The frequency with which old tuberculous lesions in the lungs, calcareous glands, and pleuritic adhesions are found in adults who have died of diseases other than tuberculosis is remarkable, and in such cases a history, not of tuberculosis, but of other pulmonary affections, may often be obtained.

The question "Is he likely to develop tuberculosis?" is commonly put to us concerning a child who has suffered repeatedly from so-called bronchitis, broncho-pneumonia, and asthma. It is possible that the correct answer may be that he has already had it, and that further attacks of miliary tuberculosis may occur so long as any active focus in the shape of tuberculous bronchial glands exists.

The statement commonly accepted that the broncho-pneumonia of measles and whooping cough often ends in tuberculosis perhaps only applies to children whose bronchial glands are already tuberculous. At all events, many children die after long protracted broncho-pneumonia, and no signs of tuberculosis are found after death. One might expect, too, that children who suffer from bronchiectiasis and fibroid lungs would fall an easy prey to tuberculosis, but as a matter of fact they do not. They are victims to chronic infection by pneumococci and staphylococci, but not by the tubercle bacillus.

Returning to the case which forms the subject of these remarks, the post-mortem examination shows that the tuberculous process in the lungs was becoming quiescent. Had it not been for the tuberculoma of the pons recovery might have taken place.

As to the focus of infection, although the bronchial glands were not obviously caseating, they were distinctly tuberculous, and it is more likely that they were the source of dissemination throughout the lungs than that the tuberculosis was secondary to simple bronchopneumonia of the left apex. It is, of course, impossible to regard the tuberculoma of the pons as the primary lesion.

I am indebted to Dr. S. N. Corry, house physician, for the clinical notes and photos, and to Mr. Herbert Perkins for the post-mortem records of the case.

LOCALISING BRAIN SYMPTOMS (HEMIPLEGIA AND HEMISPASM) AS EARLY EVENTS IN TUBERCULOUS MENINGITIS.

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In many cases of tuberculous meningitis, perhaps in the majority, the early diagnosis is difficult because the symptoms are general, vague and indefinite; indeed, it is not very unusual for the disease to run its course to a fatal termination without any more precise announcement of a brain lesion than a gradually increasing coma, with or without vomiting. In other instances there occur, in addition, motor disturbances—paralyses or convulsions—which, in such circumstances as those just proposed, are highly significant and make the identification of the clinical picture a fairly confident and easy one. A squint is perhaps the most frequent of these paralyses, though other localised palsies are far from being unknown. Convulsions, also, are not uncommon in the later phases of the disease, and while they may occasionally be localised, their distribution is in most instances widespread and bilateral. Speaking generally, all such events are relatively late phenomena, and it is their postponement which is largely responsible for the preliminary period of diagnostic hesitation or uncertainty, qualified though this may be by a greater or less measure of suspicion.

As a contrast to this story of gradual and insidious movement

and of defective and delayed clinical definition, it is necessary to note that occasionally tuberculous meningitis has an abrupt onset, and that this may take the form either of localised palsies or of localised convulsions. Such experiences are hardly likely in themselves to suggest tuberculous meningitis, seeing that the palsies and convulsions of this disease are usually, not early, but late features of the clinical history. The diagnosis in such circumstances may review the possibility of an intracranial tumour or of an attack of encephalitis; or again, and perhaps still more likely, at least in regard to convulsions, an explanation may be hoped for in the direction of "reflex irritation" arising from such influences as troublesome dentition, digestive disturbances, intestinal parasites and so on, such a view of the position being facilitated, perhaps, by the temporary character of the convulsive or paralytic events. There would seem, therefore, to be some practical value in illustrations of the statement that a localised paralysis or a unilateral convulsive seizure may mean the clinical beginning of tuberculous meningitis. So wide a departure from the usual course of the disease may readily mislead both diagnosis and prognosis, and the occasional cases which illustrate it are therefore worthy of record. It is from this point of view that the two following cases are summarised and presented. In each instance the sequel placed the diagnosis beyond doubt, but at the outset it was not easy to frame a confident interpretation.

The first patient was a boy, aged 10 years. He had at one time had some enlarged glands, but otherwise had enjoyed very good health. On September the 18th he was said to have been sick while at school, but this was regarded as a matter of no consequence, and on the two following days he was as active and happy as usual. During the night of the 20th, however, he again vomited, and in the morning it was noticed that his speech was peculiar and his face "drawn." Examination showed a paralysis of the left face and left upper limb, with a doubtful extensor response in the left foot. The paralysis disappeared in the course of forty-eight hours and the boy seemed quite well again. But on the following day there were repeated convulsive seizures, limited to the left limbs, and apparent inability to speak, though no coma or unconsciousness. On the cessation of the convulsions left hemiplegia was again observed, but otherwise clinical examination was entirely negative, this remark including both the fundus oculi and the cerebro-spinal fluid. During the convulsive seizures the temperature rose to 101° F., but prior to this it had been normal or just above 99° F. Later the paralysis entirely disappeared, but headache, persistent vomiting,

febrile temperatures, and abundant cellular elements in the cerebro-spinal fluid left no room for uncertainty in the diagnosis. In the early days of the case, however, it was not easy to be confident. The boy, it is true, had twice vomited before the paralysis was observed, but he made no complaint and showed such little evidence of general disturbance that his mother took him out to the doctor's house, and it was there that the hemiparesis was noticed. At that date a diagnosis of tuberculous meningitis would have appeared in sharp contradiction to the patient's general condition, yet subsequent events showed that this was the true interpretation. (I am indebted to Dr. J. D. R. Monro for assistance in completing the notes of this case.)

The second patient was a boy, aged 1 year and 7 months. He was brought hurriedly to the hospital because he had been suddenly seized with convulsions, and these, it was seen, were strictly limited to the right side ; the rectal temperature was 98·2° F. The child was at once admitted, and after an hour or so the convulsions ceased. On the following day he seemed quite well and there seemed to be no reason to resist the mother's determination to take him home ; there was no paralysis or other evidence of organic disease, and the cerebro-spinal fluid was free from any excess of cells and from micro-organisms. In two days' time the boy was again brought to the hospital with further convulsive seizures, and he gradually developed characteristic signs of tuberculous meningitis, though no bacilli were found in the cerebro-spinal fluid, which, however, showed a mild degree of lymphocytosis. The diagnosis was confirmed by post-mortem examination.

As in the first case, the peculiarity of the second record is the early development of motor disturbances suggesting a localised lesion in the brain and ceasing before the more generalised symptoms of meningitis displayed themselves. The absence of change in the earlier examinations of the cerebro-spinal fluid is likewise illustrated in each record, but this is hardly an uncommon experience in tuberculous meningitis ; the same may be said of the failure to find tubercle bacilli even in the later tests.

The question may be asked, How are these early, sudden, limited, and transitory developments of paresis in the one case and of convulsions in the other to be explained ? Convulsions and paralysis are, of course, not infrequent in the later stages of tuberculous meningitis, and are then presumably due to such events as increased intracranial pressure, encephalitis, and cerebral softening following vascular obstruction. It is not easy to apply any of these explana-

tions to an early and temporary hemiparesis such as is described in the first of the two cases here recorded; and though the invasion of the disease, as is the case also in other infections in childhood, may be marked by generalised convulsions, the cause of these, whatever it be, will hardly apply to the strictly unilateral spasm which marked the onset of the second case. On the face of both histories there would appear the suggestion that the sudden and limited motor phenomena marked the arrival of the specific irritant within the cranial cavity and its application to a localised area of brain tissue. That the tuberculous meningitis was in each instance a development secondary to some primary tuberculous focus may be accepted as certain, and indeed in the case of the infant this issue is closed beyond moral doubt, as the necropsy showed extensive disease of the mediastinal glands. Presumably from such primary source the irritant reached the brain through the blood-stream and in the fashion of an embolus or, more probably perhaps, as multiple minute emboli. It is not difficult to believe that the sudden arrival of such emboli, if and when they fell in force on the motor cortex of one hemisphere, would be capable of producing in the cortex disturbances which might express themselves clinically either as unilateral convulsions or unilateral paralysis. Nor is it difficult to advance to the position that this sudden blow might, after a time, be followed by a local recovery of nerve function with consequent disappearance of the convulsions and paralysis. The subsequent appearance of the signs of a generalised meningitis must doubtless be explained by the tendency of the specific irritant, when once implanted, to produce a gradually extending infection. Perhaps the chief difficulty in accepting such an explanation is the rarity of such events as are here recorded. Tuberculous meningitis is usually, if not invariably, secondary to primary tubercle existing in the chest or other part of the body, and equally the infection is commonly conveyed by the blood-stream. Why then do the specific emboli not frequently announce their arrival by such localising events as unilateral convulsions or hemiparesis? To say that the emboli are not usually distributed in the fashion necessary to produce these manifestations is consistent with the facts, but it only pushes the difficulty back by a stage. The position is, however, hardly more acute here than it is in relation to the localisation of emboli generally, for it would be a hard task to explain why such bodies, arising from corresponding sources, say the left auricular appendix, show in different cases a great variety in the pattern of their distribution. The same comment may be made in relation to the problem now at

issue, and it does not seem possible to carry the position further than to say that, whilst such an experience is not common, the arrival of the infection in tuberculous meningitis may be marked by limited motor phenomena suggestive of a localised cerebral lesion. That a localised tuberculous lesion within the skull may be the centre from which may spread a diffuse meningitis seems highly probable, if not certain, seeing that occasionally with tuberculous meningitis a limited area of obviously old-standing disease is present. In such cases the first infection has doubtless become controlled, and later, under influences which cannot be defined, has presumably taken on renewed activity. Again, occasionally in a case of phthisis pulmonalis there develops some acute cerebral event—for example, an ocular paralysis—and after an interval, it may be of several weeks, the symptoms of a generalised meningitis appear. Here, also, the probabilities would appear to be that a limited infection has resulted from the entrance of the irritant into the blood-stream, that it has for a time remained limited, and later has given rise to a spreading infection by continuity or contiguity of tissue. In the cases recorded in this paper it is suggested that the order of events is similar to that just described, with this trifling exception, that the period of limitation or quiescence of the primary cerebral infection was of less duration, being, indeed, a matter of days rather than of weeks. In this way it seems possible to explain both the early and local distribution of the paralysis and convulsions and the subsequent development of the usual clinical features of the disease.

[Two case records with histories similar to those described in this paper are reported in an article by Dr. L. W. Sauer in the 'Archives of Pediatrics,' 1914, xxxi, p. 902.]

HERNIA OF THE STOMACH THROUGH THE DIAPHRAGM IN A CHILD AGED 9 YEARS.*

By W. J. S. Bythell, M.D.,

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The following notes upon this case of hernia of the stomach through the diaphragm are of interest from both the surgical and the radiographic points of view.

* This case was reported to the Electro-therapeutical Section of the Royal Society of Medicine on April the 16th, 1915.

The patient, a boy, aged 9 years, was admitted to the Manchester Children's Hospital on January the 6th, 1914. The previous history (which was obtained with difficulty) consisted of attacks of persistent vomiting for some six months, the condition steadily getting worse. Apparently there was never at any time much abdominal pain.

On admission the child was extremely thin and looked ill. The abdomen was dull on the right side from the costal margin downwards, and tympanitic on the left. The right rectus muscle was distinctly prominent. For the first seventeen days after admission he vomited nearly every day, usually profusely; there was no abdo-

Fig. 1.

Fig. 2.

minal pain or tenderness. The child appeared to be getting thinner. A diagnosis of pyloric obstruction was made from the clinical symptoms.

On January the 19th he was sent to me for X-ray examination. On giving him a bismuth meal I found that it passed to the right of the middle line instead of to the left at the cardiac orifice, suggesting at the commencement of the examination that the stomach was transposed, although the position of the heart was normal. The outline of the stomach, however, was not that of a normally shaped stomach merely transposed to the right, but more like that of the upper sac of an hour-glass stomach. There was also obvious delay in the emptying of the organ, as nothing had passed through the pylorus at the end of seventy-five minutes. When I saw him twenty-four hours later, the whole of the bismuth was in the large intestine; the latter was normal in shape and position, except that the transverse colon was somewhat high in the abdomen.

The following day I saw him five hours after another bismuth meal. As will be seen from Fig. 1, the greater part of this meal was still in the stomach on the right side of the middle line; a small quantity having passed into the small intestine was situated chiefly in the ileum. The skiagram also suggests that the transverse colon is higher than normal as it was taken with the child in the upright position.

The next day I arranged for him to be sent to my rooms in order that my partner, Dr. Barclay, might see him with me. Fig. 2 shows the condition on that occasion. The whole of the bismuth previously given had disappeared with the exception of a small trace in the descending colon, and on giving another meal we found that it again passed to the right side.

At no time did I see any bismuth actually pass out of the stomach, so I was unable to obtain any information as to the position of the pylorus.

The diagnosis was not clear at first. My original idea was that the stomach was perhaps dragged over to the right side by adhesions with mechanical obstruction of the outlet, but Dr. Barclay afterwards suggested the possibility of a hernia of the stomach through the diaphragm, and on consideration this seemed to me to be the most likely diagnosis, as the lung structures at the right base could be seen clearly through the air-distended fundus.

On January the 24th, three days later, Mr. Howson Ray, surgeon to the hospital, operated, and the following details are taken from the hospital notes: "On opening the abdomen to the right of the middle line, and displacing the right rectus outwards, the epigastrium was found occupied by the colon; only a small piece of the stomach could be seen very far back under the diaphragm. On further exploration the major part of the stomach was discovered herniated through the œsophageal opening. The other abdominal organs were normal. The stomach was brought down and stitched to the anterior abdominal wall by four or five silk sutures, and the abdominal wound closed."

For the next sixteen days the boy did well; there was no vomiting, and he put on weight.

On February the 10th, however, there was profuse vomiting, and he vomited every day up to February the 27th, when he was again sent to me for X-ray examination.

After seeing him I reported that the stomach had passed back through the diaphragm and was exactly as when I first saw him. There was again pyloric obstruction.

On March the 3rd, therefore, Mr. Howson Ray opened the abdomen for the second time, and again found that the stomach had passed through the œsophageal opening of the diaphragm. On this occasion he brought a piece of the stomach through the abdominal incision and did a gastrostomy so as to fix the organ permanently in this position. I may add that at both operations he found that there was a good deal of resistance to the pulling of the stomach down through the œsophageal opening, and that it had a tendency to slip back on relaxing the tension.

I have not seen the boy since the second operation, but the subsequent history appears to indicate that a cure has been attained.

Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, May the 28th, 1915.

The President, Mr. T. H. Kellock, *in the Chair.*

Hemiplegia in a Girl, aged 10 years; onset sudden, but without convulsions; no evidence of Visceral Disease.—Dr. C. O. Hawthorne.—The child was in good health prior to April the 4th. On that day her mother left her sitting on a chair by the fireside, and when returning shortly afterwards found her lying on the floor paralysed on her right side and unable to speak plainly. She did not observe anything in the nature of a fit or convulsion. When admitted to the hospital on April the 8th the girl had right hemiplegia, was unable to talk plainly, and had a temperature of 103° F. Examination otherwise negative and cerebro-spinal fluid apparently normal. The temperature fell to normal the next day and the paralytic condition soon began to improve.

Cystic Lymphangioma in Infant.—Dr. Eric Pritchard.—This case was shown to the Section on January the 23rd, 1914, as one of persistent "caput succedaneum." Subsequent events have proved this view to be incorrect, and that the tumour was probably a congenital cystic hygroma or lymphangioma in an unusual situation. At the time the diagnosis was obscured by the fact that the tumour was the presenting part (left shoulder presentation) and that the contents of the cyst, which were drawn off by hypodermic needle, consisted of a blood-stained fluid like blood serum. The tumour had continued to increase in size *pari passu* with the growth of the infant.

Child with Defective Patellæ and Contraction of Limbs; Case for Diagnosis.—Dr. H. Thursfield.—Child, aged 8 months, with asymmetry of head and chest; thumbs flexed into palms; legs flexed at knee-joints,

cannot be fully extended; patellæ and fibulæ obviously defective. Talipes of both feet. Fourth child, full term, natural labour; other three alive. No miscarriage. Mother quite healthy during pregnancy. Diagnosis of condition required, and suggestions as to treatment of the legs.

Case of Polio-encephalomyelitis.—Dr. Eric Pritchard.—The patient, a healthy boy, aged 7 years, developed a squint and double vision on April the 27th. He was brought to the Queen's Hospital for Children on May the 3rd, when he was examined, but no other lesion could be discovered. On May the 8th the parents noticed weakness in right arm and dragging of right leg. On May the 10th he was brought again to the hospital and then complete palsy of the sixth left nerve was discovered. No nystagmus. Discs normal. Partial paralysis of the right twelfth nerve. Shoulder girdle: Some weakness of right side. Arms: No wasting of arm and hand muscles; temperature of both the same; weakness of right arm and hand; grip poor on right; right thumb and fifth finger can only be opposed with difficulty; jerks +, more so on left side. Abdomen: Reflexes on left side active, absent in upper half on right side; no wasting. Legs: No wasting; right leg and foot colder than left; weakness of muscles; knee-jerks active on right, exaggerated on left; no ankle clonus; ? extensor response on right, flexor on left.

On May the 14th the boy was admitted to the hospital. New lesions found to be present. Seventh nerve palsy (incomplete type) on the right side; eighth nerve affected; partial deafness; taste normal. Arms: No wasting; grip on right side weaker than left; jerks exaggerated on right, active on left; total inability to oppose thumb and fifth finger; marked dysdiadokokinesis on right side. Abdomen: Reflexes absent on right side. Legs: Weakness greater on right side; right colder than left; knee-jerks, clonus on right, exaggerated on left; no ankle clonus; Babinski's sign on right side, flexor response on left. No spasticity. Inco-ordination in walking. No Rombergism. Sensation to light, and painful touch on right leg and foot slightly diminished, otherwise normal.

Case of Ectrodactyly.—Dr. J. D. Rolleston showed a girl, aged 3 years. The right upper arm and forearm were of the same size as the left, but the right hand was rudimentary. The right metacarpus was 2·5 cm. long by 4 cm. broad, the left 5·5 cm. by 6·5 cm. broad. The phalanges of the right hand were represented by five small tubercles; the thumb tubercle was the largest, being 9 mm. in length, and alone carried a nail, the little finger was 2 mm. long, and the second and third fingers only 1 mm. long. The thumb rudiment and, to a less extent, the other tubercles were movable at will; there was no trace of a scar. The left upper limb and both lower limbs were normal and there were no other external deformities nor apparent visceral anomalies. Apart from the ectrodactyly the child was well developed. The parents and two other children in the family presented no deformity. The mother attributed the patient's deformity to having seen, during the fourth month of pregnancy, her eldest daughter catch her fingers in a mangle. The girl escaped with slight bruising of the fingers, and the mother did not anticipate the deformity of her child.

Case of Syndactyly of the Left Hand with Constriction of the Right Forearm in a Girl, aged 4 years.—Dr. E. G. L. Goffe.

Amaurotic Family Idiocy (Waren Tay-Sachs Disease).—Drs. F. E. Batten and Mildred A. Jukes showed an infant, aged 11 months, born of Jewish parents at full term, and apparently normal at birth. Weakness of the arms and legs was soon observed, and at the age of three months the mother noticed that the child was blind. The child was the youngest of eight; one sister, similarly affected, died in infancy one year ago. She was a well-nourished child, but feeble; could not sit up without support. There was no rigidity; all reflexes were normal. The child took no notice of her surroundings, lay quietly in bed, and was not irritable. There was some perception of light, otherwise the child appeared to be blind. On examination of the fundi, the typical white patch was seen on the maculæ with a central, cherry-red spot. The cerebro-spinal fluid was normal. The Wassermann reaction was negative.

Pericarditis in Diphtheria.—Dr. Philip Figdor.—A boy, aged 3 years, was admitted to hospital for laryngeal diphtheria on November the 30th, 1914. Tracheotomy was performed shortly after admission, with instant relief. On December the 14th, the cardiac rhythm became irregular. On January the 11th, 1915, a faint systolic murmur was heard at the apex. On February the 27th, the cardiac dulness was greatly increased in both directions, and a soft ventricular murmur was heard at the apex in the axilla and pulmonary area, and there was occasional reduplication of the second sound. On March the 1st, the murmur was heard in all the areas, but best at the apex. The cardiac dulness was slightly decreased on the right. On March the 5th, the general condition of the patient was much worse, cyanosis was marked. The cardiac dulness was greatly increased in both directions, and a harsh, double murmur was heard in all the areas. A diagnosis of pericarditis was now made. March the 8th: Cardiac dulness considerably reduced. A mid-diastolic murmur was heard within the apex. By March the 15th the cardiac dulness was again greatly enlarged, and death took place on March the 23rd.

Post mortem, the parietal and visceral layers of the pericardium showed recent pericarditis. There was about 10 oz. of serous pericardial fluid. Mitral valve: Edges thickened and eroded. Aortic and pulmonary valves healthy. Left ventricle hypertrophied; right ventricle slightly hypertrophied. Great œdema of pericardium and tissues at root of neck, including the thymus. Lungs almost airless; no tubercle; no evidence of consolidation. Very little fluid in pleural cavity. Slight œdema of mesentery. Gall-bladder œdematous, walls being about $\frac{1}{3}$ in. thick.

Case of Hypopituitarism.—Dr. F. Langmead.—The patient was a boy, aged 19 years and 3 months. He was extremely obese, and his general development, mental and physical, resembled that of a boy of 11 or 12 years. The genitals were rudimentary. There was no hair on the face, but some on the suprapubic region. The breasts and general development were of the feminine character. The voice did not appear to have broken. The amount of urine passed varied between 104 and 260 oz. *per diem*. There was a corresponding polydipsia. The optic discs and fields of vision were normal. The blood-pressure ranged between 110 and 130 mm. Hg. Sugar tolerance had not been tested adequately. The diagnosis was established by a skiagram of the pituitary fossa which was seen to be minute, the anterior clinoid processes being greatly thickened.

Localising Brain Symptoms (Hemiplegia and Hemispasm) as early events in Tuberculous Meningitis.—Dr. C. O. Hawthorne, (v. p. 232).

Abstracts from Current Literature.

Acute Infectious Diseases.

The incidence of diphtheria in relation to defective drainage (*'Med. Press,'* 1914, II, *p.* 427).—**A. L. Dykes** does not think that defective drainage has much to do with the incidence of diphtheria. In 693 cases of diphtheria in Oldham the house was inspected after notification and the drains examined. Inspection revealed drainage defects in 82 (11·6 per cent.). 1626 houses were inspected independently of infectious disease or complaints of nuisances with the result that in 179 (11 per cent.) drainage defects were found. From these statistics it would appear that in Oldham the relation of defective drainage to diphtheria is an unimportant one.

J. Allan.

Acidosis following diphtheria (*'Lancet,'* 1914, II, *p.* 1091).—**H. W. Harding** reports this condition in a child, aged 4 years, who was under treatment for clinical diphtheria (swabs showed presence of Hoffman's bacillus; Klebs-Loeffler bacillus not seen). Symptoms of acidosis supervened when convalescence was well advanced. The vomit had an acid odour, both it and the urine giving the colour reaction with ferric chloride. The child was very drowsy. The condition cleared up under treatment with sodium bicarbonate in large doses. J. Allan.

Rare complications of diphtheria (*'Mitteil. u. d. Hamburg. Staatskrankanst.,'* 1914, XV, *p.* 15).—**F. Reiche** records 47 cases observed by him in recent years. In 31 the gastric mucosa was involved by secondary diphtheritic processes; in 25 of these the stomach was alone affected, in 4 the œsophagus and in 2 the rectum as well. In 4 the membrane extended over the whole of the gastric mucosa, in 5 there were extensive areas, and in 4 the changes were localised to the cardia. Lesions in the œsophagus were noted in 12 cases, apart from those in which membrane in the upper part of the œsophagus was directly continuous with that in the larynx. The lower third of the œsophagus was chiefly affected, especially the part next the cardiac opening; in only 1 case did the upper third show a slight change. In 7 the lesions were slight, and in 3 very extensive. In 8 the œsophagus was the only site of complications; in 4 the stomach was also affected. In 2 the duodenum showed similar changes—in one case the duodenum was affected alone, and in the other in association with a similar lesion on the ileo-cæcal valve. The ileum was affected in another case in seven different points. The rectum was involved in 4 cases, twice alone and twice in association with gastric lesions. In one of these cases numerous diphtheria bacilli were isolated from the muco-sanguineous stools during life. In a puerperal woman who contracted severe faucial diphtheria the vaginal portion of the cervix was covered with membrane containing numerous diphtheria bacilli. Two cases of anal diphtheria were noted in heredo-syphilitic children, in whom diphtheria bacilli were cultivated from the anal condylomata. The 44 cases with complica-

tions in the alimentary tract were with one exception children, and all except the two cases of anal diphtheria had unusually severe attacks of diphtheria and died; none showed any symptoms permitting a diagnosis of the complications during life. In 38 cases bacteriological examination was made of the blood from the right heart. In 16 it was sterile, 4 showed diphtheria bacilli, 3 diphtheria bacilli and *Streptococcus hæmolyticus*, 9 *Streptococcus pyogenes hæmolyticus*, 2 *Staphylococcus pyogenes aureus*, 1 *Diplococcus lanceolatus*, and 3 mixed infections. J. D. Rolleston.

The Schick reaction and its practical applications (*'Arch. of Ped.,'* 1914, xxxi, *p.* 481).—**W. H. Park, A. Zingler** and **H. M. Serota.**—Experiments have shown that diphtheria is only contracted by those who have no antitoxin or only a minute quantity in their blood and tissues. Schick's reaction, which is a simple method for determining the presence of this antitoxin, depends on the local irritation of a minute quantity of diphtheria toxin injected subcutaneously. If antitoxin is absent or present only in very small amount a positive reaction appears in twenty-four to forty-eight hours, characterised by a circumscribed area of redness and slight infiltration. It persists seven to ten days and then fades, leaving brownish pigmentation. The dose of toxin required is $\frac{1}{50}$ the minimal lethal dose for a guinea-pig in ·1 c.c. or ·2 c.c. of normal saline. The writers have used the test on 700 children admitted to the scarlet fever pavilion of the Willard Parker hospital, among whom 400, or 57 per cent., were negative. The 300 positive cases all received some form of toxin-antitoxin mixture. Of those who reacted insufficiently to immunisation with toxin-antitoxin mixtures, forty-two developed clinical diphtheria, mostly of a mild type. The percentage of positive reactions was highest between the ages of one and four years. It was less during the second six months of life and less in older children and in adults. The writers' conclusions are as follows: (1) The Schick reaction is a reliable and convenient index of the susceptibility or non-susceptibility of individuals to diphtheria. (2) It is an accurate clinical test to determine the efficiency of active immunisation with toxin-antitoxin mixtures. (3) It helps in the diagnosis of clinically doubtful nasal diphtheria. (4) It adds further experimental proof to the clinical experience that very toxic cases require early intravenous administration of large doses of antitoxin. (5) The results obtained in families suggest other causes besides infection with virulent bacilli as factors in the production of natural antitoxin. J. D. Rolleston.

Schick reaction (*'Journ. Amer. Med. Assoc.,'* 1915, lxiv, *p.* 1203).—**H. N. Bundesen.**—Observations by numerous workers, notably Schick, of Vienna, and Park, of New York, show that the blood serum of about 80 per cent. of the newborn, from 50 to 60 per cent. of children, and 90 per cent. of adults contains sufficient diphtheria antitoxin to make them insusceptible to diphtheria, and hence makes it unnecessary for them to receive a prophylactic injection of antitoxin. A practical method for determining whether or not a person is susceptible to diphtheria has recently been devised by Schick. For the carrying out the test it is essential to have an accurate 1 c.c. all glass hypodermic syringe, having a scale divided into ten parts, and a short platinum iridium needle, sufficiently fine to be introduced between the layers of the skin. To introduce the needle have the opening or bevelled aspect of the point looking upward and hold the head of the syringe lower than the point when introducing the needle into the skin. The skin of the flexor

surface of the forearm is prepared by cleaning with tincture of green soap and 95 per cent. alcohol. With the thumb and first finger of the left hand pinch up a small portion of the skin and carefully insert the needle into, but not through the skin so the opening in the point of the needle is covered and so the needle can be seen beneath the superficial layer. A dilution of a fresh standard diphtheria toxin is made of such a strength that 0·1 c.c. contains $\frac{1}{50}$ of the minimum lethal dose for a 250 grm. guinea pig, and this is injected, pressure being exerted in an upward direction. If the injection has been properly given there is to be seen at once a white bleb-like elevation which persists for several minutes and is distinctly studded with little pits corresponding to the opening of the hair follicles. The results are available at the end of twenty-four hours. If antitoxin is absent or present only in very small amounts—insufficient for protection—a positive reaction appears, which is characterised by a constantly increasing circumscribed area of redness and induration of from 10 to 25 mm. in diameter that reaches its maximum in forty-eight hours. It persists for about a week, and on fading shows a brownish pigmentation with superficial scaling and a characteristic central infiltration. Positive reactions indicate that there is less than $\frac{1}{30}$ unit of antitoxin in 1 c.c. of blood serum. Such persons are susceptible to diphtheria. Though intensity of the reaction varies in different individuals, a well-marked redness indicates a complete or almost complete absence of diphtheria antitoxin. Faint reactions point to the presence of small amounts of antitoxin. There are no antibodies in the serum of children taken ill with diphtheria; those persons taken sick prior to injection with antitoxin always give a positive skin reaction, while the negative intracutaneous reaction always proves the existence of protective bodies in sufficient numbers for prophylaxis against diphtheria toxins. Thus by means of the Schick test we are in a position to tell definitely who is susceptible to diphtheria, and when an epidemic breaks out can inject those and those only, paying no further attention to the ones giving a negative reaction. In regard to the new-born, their high percentage of immunity is undoubtedly accounted for by the fact that the colostrum and even the milk of nursing mothers to a certain degree is antitoxic. Park concludes that infancy is protected from most of the common communicable diseases through this absorption from the colostrum during the first days of life. Bacillus "carriers" invariably have a high antitoxin proportion and depend on this factor for immunity. A fact which is worthy of note is that children of the same family invariably gave a similar reaction. They were either all negative or all positive.

T. R. Whipham.

Some observations of the Schick test (*'Journ. Amer. Med. Assoc.,'* 1915, lxiv, *p.* 1205).—**C. Graef** and **G. Ginsberg.**

The intradermic diphtheria toxin test (*'Journ. Amer. Med. Assoc.,'* 1915, lxiv, *p.* 1206).—**E. E. Moody.**—These two papers both deal with the same subject as the foregoing. The authors come to practically the same conclusions and agree as to the value of the Schick test.

T. R. Whipham.

An analysis of 62 fatal cases of diphtheria (*'Med. Journ. of Austral.,'* 1914, i, *p.* 370).—**W. F. Litchfield.**—The cases were as follows: Malignant diphtheria 31 cases; laryngeal 26; laryngeal and severe pharyngeal 3; laryngeal and malignant 1; pharyngeal 1. Twenty-nine cases were in males, 33 in females; laryngeal diphtheria chiefly affected

children under 4 years. In deaths due to heart failure the pulse slowed down at the onset of the heart failure; in those due to toxæmia, the pulse was always rapid. One of the commonest symptoms of heart failure was vomiting. Hæmorrhages into the skin or mucous membranes always ended in death. The temperature was no guide to the severity of the disease. Great restlessness and pain of an agonising character in the upper part of the belly were frequent. The cause of death in severe toxic diphtheria was usually heart failure, in laryngeal diphtheria asphyxia and pneumonia. Large doses of antitoxin from 50,000 to 140,000 were employed.

F. R. B. Atkinson.

Intravenous injection of diphtheria antitoxin in children (*'Amer. Journ. Dis. Child.,'* 1915, ix, *p.* 59).—**E. H. Schorer** reports on fourteen cases injected by the external jugular vein according to the method employed by Wollstein for obtaining blood for cultures (*vide* British Journal of Children's Diseases, 1913, x, *p.* 78). Sixteen injections in all were given, consisting of 5000 units in ten cases, and of 10,000 units in six cases. In four an immediate reaction followed, manifested by a marked chill, a rise of temperature from 103·2° to 104° F., and in two cases by respiratory distress. All the symptoms disappeared in from three to twenty hours. Four subsequently developed an ordinary serum reaction. Two died, death occurring from seven to fourteen hours after the first injection in each case.

J. D. Rolleston.

Abortive scarlet fever in the first months of life (*'Derm. Wochenschr.,'* 1914, lix, *p.* 1120).—**Levi.**—Children during the first months of life if exposed to infection possess no special immunity to scarlet fever. The disease in such cases, especially in infants nursed by mothers who have recently had scarlet fever, appears to run a mild abortive course.

J. D. Rolleston.

Gonococcus septicæmia with arthritis following scarlet fever (*'Arch. of Ped.,'* 1914, xxxi, *p.* 804).—**M. Nicoll, jun.,** records three cases in a girl, aged 21 months, a boy, aged 5 years, and a girl, aged 6½ years. The two girls had a vaginal discharge containing gonococci; the boy had no urethritis, but no urethral smears were examined during the arthritis. All presented a maculo-papular eruption which suggested a blood infection. The presence of gonococci in the blood showed that the arthritis was not scarlatinal. Two of the cases were treated with polyvalent gonococcus vaccines, but the course of their disease did not differ from that of the one in which vaccines were not used. All recovered. J. D. Rolleston.

A case of infective megalerythema with Rumpel-Leede phenomenon (*'Riv. di Clin. Pediat.,'* 1914, xii, *p.* 914).—**L. Sympa.**—A boy, aged 13 years, on the eighth day of a febrile attack in which the temperature ranged from 38° to 40° C., noticed an eruption on the thorax and abdomen, chiefly on the left side. At the commencement of the third week of the illness he was brought to hospital, when he was found to have a temperature of 38·6° C., pulse 112, a dry coated tongue red at the edges, slight stomatitis, and injected fauces. Nothing else abnormal was noticed, but a maculo-papular exanthema of a wine red colour; the papules were darker at the centre with distinct margins, varying in size from a small lentil to a halfpenny; pressure caused some fading. They were almost confluent on

the sides of the thorax, back and abdomen. In the groins, inside the thighs, and distal extremity of the limbs the eruption left here and there small tracks of normal skin. Scratch marks were visible in places. The face was little affected and pallid and, like the hands and feet, slightly œdematous. Widal's reaction was negative; there were no Klebs-Loeffler bacilli; slight polynucleosis was present; when a bandage was applied to the arm for the purpose of giving an intravenous injection, the eruption in the part below the bandage became much more intense and of a blackish colour, assuming a distinctly hæmorrhagic character, as occurs in scarlatina (Rumpel-Leede phenomenon) with a distinct line of demarkation. After four or five days of injections of corrosive sublimate the temperature began to decline and the eruption to fade, but the application of the bandage always produced the same phenomenon, though with diminishing intensity. Desquamation followed. The whole illness lasted two months.

VINCENT DICKINSON.

Measles; incubation, infectivity, immunity, early manifestations (*'Arch. of Ped.,'* 1914, XXXI, *p.* 885).—**C. Herrman** has not seen an *incubation period* of less that seven or more than fourteen days, and thinks that in some of the reported cases with a longer incubation period the source of infection may have been difficult to determine or some may have been cases of rubella. The time which elapses between the initial rise of temperature and the appearance of the eruption varies from one to five days and is usually two to three days; the time between the appearance of Koplik's spots and the eruption one to five days, usually one to two days. *Infectivity*: For several years Herrmann has stated that measles is contagious for only three or four days. The disease is contagious from the beginning of the catarrhal symptoms to the fall in temperature, the latter usually corresponding to the time of completion of the eruption. The blood is probably infectious from the initial rise of temperature to its fall in uncomplicated cases. The secretions of the nose and mouth in sneezing and coughing are the carriers of the infectious material. The scales of the skin play no part. Isolation of two weeks or more is unnecessary—five days at most are enough. Herrman has often admitted children with a fading measles rash (who had a complication or some other disease) to a hospital ward and has not had any infection of the other children in the ward. *Immunity:* Probably not more than 2 to 3 per cent. of all individuals are immune. Herrman has never seen a second attack of measles. Many of the reported cases will not bear analysis. It is necessary that Koplik's spots should have been observed in both attacks, for fever, catarrh, and a morbilliform eruption are not sufficient. Infants under five months are practically immune. Herrman has seen only three undoubted cases of measles under five months. This immunity is found in the artificially fed as well as in breast fed, and is not confined to the first-born. *Early manifestations:* (1) Fever. A rise of temperature is the first definite symptom. The curve is not characteristic, but an intermission of twenty-four hours after the initial rise is very suggestive. (2) Decrease in weight. Herrman has not found this of great practical value. It averages only a few ounces, and may be caused by a number of slight derangements. (3) Changes in the blood. During the incubation period, about six days before the eruption, there is a leucocytosis; during the invasion there is leucopenia with a distinct diminution in the eosinophiles and a relative and absolute dimunition of the lymphocytes. (4) Enlargement of the lymph nodes is present in a large number of patients, but occurs

frequently in other diseases which may be confused with measles. (5) Oral manifestations. Koplik's spots are pathognomonic. The eruption described by Flindt on the palate and Comby on the gums are not. Herrman has sometimes observed hæmorrhagic spots on the buccal mucosa as an early manifestation, as well as redness and swelling of a small mass of lymphoid tissue on the posterior portion of the soft palate just above the notch between the uvula and the posterior pillars of the fauces. Grumann (*'Munch. med. Wochenschr.,'* 1914, LXI, *p.* 132) has recently described small specks or streaks on the tonsils which are present two or three days before the eruption. (6) Conjunctival manifestations. The caruncle at the inner canthus becomes red, swollen, and injected at the very beginning of the catarrhal stages, and frequently shows Koplik's spots on its reddened surface.

J. D. ROLLESTON.

Ecthyma gangrænosum in measles (*'Arch. f. Derm. u. Syph.,'* 1914, CXX, *p.* 739).—**A. Takahashi** records seven cases in Japanese infants, aged from 8 months to 2 years. Four died within a month, one recovered, and in two the issue was doubtful though probably fatal. Four different forms are described: (1) The ordinary form, in which vesicles, pustules, and ulcers develop on the posterior surface of the legs and the backs of the hands and feet. (2) A hæmorrhagic necrotic form. (3) A phlegmonous form specially affecting the abdomen and genital region. (4) A furuncular form whose sites of predilection are the trunk and head. In addition to the ulceration, the pathological anatomy consists in a septic spleen, degenerative changes in the parenchymatous organs, broncho-pneumonia, swelling of the lymphoid tissue and occasionally subcutaneous hæmorrhages and intestinal ulcers. The changes in the skin appear to start in the sweat glands. Bacteriological examination in the first case showed staphylococci, streptococci, and diphtheroid bacilli, the latter being also present in the blood. In the other cases only *Staphylococcus aureus* was found. J. D. ROLLESTON.

Observations on rubella (*'Semaine Méd.,'* 1914, XXXIV, *p.* 144).—**Spieler.**—An epidemic of rubella occurred in Vienna from November, 1911, to June, 1912, with the highest morbidity for twenty years. The incubation period varied considerably, but on the average was sixteen to seventeen days. A buccal enanthem was seen in 82 per cent.; in 30 per cent. there were punctiform hæmorrhages and in 2 superficial necrosis of the buccal mucosa. A prodromal fever was noted in five cases, lasting from one to six days before the appearance of the eruption. The temperature was never higher than 38° C. The cubital glands were enlarged in 50 per cent. and the thoracic in 16 per cent. The spleen was never affected. There was sometimes slight transient albuminuria; the diazo-reaction was always negative. The blood during the incubation period showed a neutrophile polynuclear leucocytosis, and during the eruption a moderate leucopenia with a relative neutrophile leucopenia and a relative lymphocytosis. In 16 per cent. there was gingivitis after the appearance of the rash. The tuberculin cuti-reaction was not affected by rubella. One case had a relapse six or seven days after the appearance of the first eruption. J. D. ROLLESTON.

A case of generalised vaccinia (*'Edin. Med. Journ,'* 1915, I, *p.* 44).—**R. C. Low.**—The disease occurred in a child, aged 3 years, who, owing to extensive seborrhœic dermatitis, had not been previously vaccinated. A younger brother had been vaccinated in the usual way and apparently the

mother, who had been dressing the baby's vaccinated arm and at the same time treating the older boy's skin for seborrhœic dermatitis, had accidentally vaccinated him on the right thigh. Two excellent photographs are given to illustrate this somewhat rare condition. J. Allan.

Remarks on whooping-cough with especial reference to asphyxia and continued fever (or constitutional whooping-cough) (*'Med. Journ. of Austral.,'* 1915, I, *p.* 211).—**M. C. de Gavis** divides pertussis into the ordinary and the constitutional form. The latter shows a tendency to recurrent fever and asphyxia, and is very fatal, especially in the aborigines. She describes six cases, four of which died.

F. R. B. Atkinson.

Convulsions during pertussis (*'New York Med. Journ.,'* 1914, C, *p.* 1054).—**L. Fischer.**—A baby, 8 months old, a fortnight after commencing pertussis had convulsions recurring about every six hours. Colonic injections of bromide and chloral gave no relief, neither did chloroform anæsthesia. Lumbar puncture was equally unsuccessful. The right ventricle was then aspirated through the anterior fontanelle and 20 c.c. clear fluid withdrawn with the result that the convulsions ceased entirely and did not recur. The child made a perfect recovery. The writer recommends this treatment for cases of severe frequent convulsions in pertussis.

J. Porter Parkinson.

Typhoid fever in children (*'Am. Journ. Dis. Child.,'* 1914, VIII, *p.* 130).—**H. D. Chapin.**—The paper is based on the study of eleven cases aged from 2 to 8 years. The duration of the fever varied from seven to forty-two days. In only five did the temperature run very high, two reaching 106° F., one 105° F., and two 104° to 105° F. Blood examination showed that the red cells were about normal in number and that there was no appreciable leucopenia. There was an abnormally high percentage of polymorphs. The gastro-intestinal symptoms were not severe. Vomiting at the onset occurred in four, and during the fever in one. Five had diarrhœa, five were constipated, and one showed no abnormality. In no case was the spleen palpable. The patient's received the ordinary ward diet with the exception of meat, viz. milk, cocoa, eggs, bread, toast, crackers, cereals, jelly, potatoes, gravy, broths, custard, junket, apple sauce, orange, ice cream, and lady fingers. Meals were given every three hours throughout the day. Seven cases gained in weight during the fever, two showed a slight loss, and two an appreciable loss. Two cases developed tonsillitis, two otitis media, one hypostatic pneumonia, one pyelitis, and one bronchitis, but none of the complications were very severe and there were no relapses. J. D. Rolleston.

High caloric diet in typhoid fever of infants and young children (*'Am. Journ. Dis. Child.,'* 1915, IX, *p.* 387).—**L. E. La Fetra** and **L. C. Schroeder** report on forty-eight cases aged as follows: Under 2 years one case, from 2 to 6 years twenty-one cases, from 7 to 12 years twenty-six cases. They were fed three-hourly with the usual food for a child in health except that the only meat was creamed chicken. To increase the caloric value of the liquid food, which was practically always milk, lactose, cocoa, and usually cream were added. The general rule was to have the protein calories not less than 7 nor more than 15 per cent. of the total number of calories given. The total number of calories taken varied from 100 to 300

calories per kilogram. Unless toxic nervous symptoms were present, the fever did not prevent the child taking a generous diet, but as the temperature fell, the amount of food taken was greater. The result of this diet was that the general condition of the patients was remarkably good. The so-called "typhoid state" occurred in a much smaller proportion than under the old methods. Only six had abdominal distension and in but one was it severe. Five had intestinal hæmorrhage, but in only two was it severe. Thirteen were irrational during the early stage of the disease. The writers think that most of the severe nervous symptoms of the late stage are due to starvation and the consequent increase in the toxæmia. Only one death occurred, due to pneumonia, four had relapses. Sixty per cent. gained in weight during the course of the fever, and it was found that 92 per cent. had gained weight on leaving the hospital. J. D. Rolleston.

A fatal case of rabies in a child (*'Canad. Journ. of Med. and Surg.,'* 1914, xxxvi, *p.* 245).—**J. G. Fitzgerald.**—A girl, aged 4 years, was admitted to hospital suffering from nervousness and was said to have fits or spasms. She had been bitten by a dog seven weeks before, which had been kept under observation for ten days and shown no symptoms. Pasteur treatment had, therefore, not been given. Death took place two days after admission. Histological examination of the brain failed to reveal Negri bodies. A rabbit and guinea-pig were then given an intra-cerebral injection of an emulsion of the brain. The rabbit died twenty-four days later with symptoms of rabies, though no Negri bodies were found in its brain. In the guinea-pig, which died thirty days after inoculation, these bodies were present.

J. D. Rolleston.

A case of bacillus dysenteriæ septicæmia (*'Journ. Amer. Med. Assoc.,'* 1914, lxiii, *p.* 1853).—**W. T. de Sautelle** reports the case of a 3-weeks-old breast-fed infant which had been in perfect health before the onset of the disease. For a day or two the baby refused to nurse, became irritable, restless and did not sleep. The child was stupid and listless, whined at times, and objected to the slightest touch. Physical examination revealed no abnormalities or pathological processes in any of the organs. The temperature was 103° F. and pulse 180. At this time there was no diarrhœa. In consideration of the fact that the grandmother of the infant was suffering in the same house with typhoid fever, a blood-culture was made and the *B. dysenteriæ* was obtained in pure culture. Although the baby's toe was carefully cleansed and the blood dropped directly into the bouillon, not much significance was paid to the result of the culture. The baby continued to have a fever varying from 101° to 104·5° F. in spite of antipyretic measures, and also developed a watery diarrhœa. Five days later the baby suddenly began to have severe convulsions which came on every few minutes and lasted from five to ten minutes. When seen the hands, face and feet were very cyanotic, the pulse thirty to the minute, the breathing of the Cheyne-Stokes type, the pupils dilated and inactive to light, divergent strabismus, the tendon reflexes absent (at the first examination they were normal), and the child comatose. Through a lumbar puncture needle the spinal fluid flowed out quite rapidly, but contained at least one-half blood. The fluid came as bloody at the end of the flow as at the beginning, in fact, the needle was withdrawn and re-introduced at three different places with the same result. After the removal of 3 or 4 c.c. spinal fluid the convulsions ceased for a time, the pulse and respiration improved, and the cyanosis

cleared up. The child died several hours later. Post mortem was refused. The spinal fluid obtained was carefully placed in bouillon and an organism found which was identical in all respects with the one obtained in the blood-culture. It was a Gram-negative short bacillus, only sluggishly motile, and did not produce indol in five days, or coagulate or digest milk. It produced acid in litmus milk and this remained so for three days. In dextrose, lævulose, lactose, mannite, galactose, maltose, and dextrin bouillon this bacillus produced acid, but no gas, in twenty-four hours. Saccharose and inulin were unchanged. Death was, no doubt, due to the cerebral hæmorrhage rather than to the toxæmia. The source of infection could not be ascertained. The child was breast-fed and the parents denied having given it any other food. It may have been given unboiled water, but this they also denied. The sick grandmother handled the infant and even kissed it on the mouth several times. The diagnosis in her case, however, was unquestionably typhoid fever, as a blood-culture revealed an organism identical in all its reactions to the *Bacillus typhosus*. T. R. Whipham.

Dermatology and Syphilis.

Pemphigus foliaceus neonatorum (*'Med. Record,'* 1915, lxxxvii, *p.* 63).—**A. L. Henkin** delivered normally, a female child, weighing 6½ lb. On the day after delivery a bulla filled with opaque fluid appeared half an inch to the left of the umbilicus. The temperature was 98·6°. Next day the bulla had increased to an area about two inches long and one inch wide. On the next day all the abdomen was involved. The entire skin of the abdomen came off leaving a raw red surface covered with serum. The area around the umbilicus was gangrenous. The temperature was 103·6°. There was no history of syphilis or tubercle. Christopher Rolleston.

Hereditary epidermolysis bullosa and congenital pemphigus (*'Ric. di Clin. Pediat.,'* 1914, xii, *p.* 581).—**J. Cappelli** describes two cases. He maintains that while they are easily distinguishable from other bullous affections of the skin such as ordinary chronic pemphigus, dermatitis herpetiformis, and infective pemphigus, they can also be differentiated by clinical and anatomical peculiarities. Points of interest are the hereditary, congenital or familial, the definite and fixed course, the preservation of good general health, and especially the histological changes of a degenerative nature, which are noticeable in the healthy skin not attacked by the eruption. The author considers that the most plausible pathology is a dystrophy of the skin which gives rise to a complex of anatomical and functional disturbances, but he is unable to decide whether this dystrophy has a nervous or endocrinic origin. Owing to the uncertain pathology and obscure ætiology treatment is necessarily symptomatic and powerless. The prognosis is not grave as regards general health, but the patients are condemned to an infirmity, sometimes permanent, caused by pain and interference with activity.

Vincent Dickinson.

Mongoloid markings on the ventral aspect of the body (*'La Pediatria,'* 1915, xxiii, *p.* 93).—**O. Cozzolino** records the cases of two brothers, aged 37 days and 9½ years respectively, one of whom had a mark on the antero-internal aspect of the left knee and the other on the antero-external region of the left side of the thorax below the nipple extending to the parasternal line. The younger child has also numerous sacrococcygeal

markings, while a third brother, about two years of age, was said to have had typical markings in this region, which had now disappeared.

VINCENT DICKINSON.

The relative frequency of mongoloid marks among the infantile population of Cagliari (*'La Pediatria,'* 1914, XXII, *p.* 801).—**O. Cozzolino** has investigated a large number of these cases occurring in that part of Sardinia and found that 74 children out of a total of 1182 patients presented these marks. In infants under one year the percentage was about 16·8 per cent. A noteworthy fact was that in illegitimate children under one year the percentage was as high as 30 per cent. The author gives a full description of the cases and of the histological appearances in two of them. He draws attention to the familial occurrence of several of them, and even in all of the children from the same marriage, and in two cases was able to trace their existence in at least two successive generations which gives fresh support to the doctrine of the monogenism of the human race. The atavistic theory, which interprets these marks as a physiological characteristic common to all races at a certain period of phylogenetic development, deserves greater consideration in view of their anthropological significance. With regard to the dermatological significance, while their nævoid character cannot be excluded, the following facts are against it: (*a*) concomitant teratological facts may be interpreted as fortuitous coincidences; (*b*) the constancy of the sacro-lumbar and coccygeal site even in multiple and diffuse marks; and (*c*) the transient duration of the these marks. The hæmatic origin of the pigment is excluded by the negative ferric reaction and the melanotic origin must be admitted.

VINCENT DICKINSON.

Mongolian blue spots at São Paulo (*'Arch. de Méd. des Enf.,'* 1915, XVIII, *p.* 154).— **C. Ferreira.**—302 infants, aged from 15 days to 2 years, admitted to the infants' dispensary at São Paulo were classified as follows: Whites 248, mulattos 44, negroes 9, Japanese 1. The Mongolian blue spots were present in 4, or 1·6 per cent., of the whites, in 30, or 68 per cent., of the mulattos, in 3, or 33 per cent., of the negroes and in the Japanese infant.

J. D. ROLLESTON.

Erythema nodosum with facial paralysis and hemiplegia (*'Amer. Journ. Obstet.,'* 1915, LXXI, *p.* 187).—**M. Hahn.**—A male infant, aged 25 months, developed signs of an acute infection with a remittent temperature between 101·4° and 104·8° F. On the fourth day erythema nodosum appeared on both legs. On the twelfth day left facial paralysis occurred and lasted for about a fortnight. On the sixteenth day the child had general convulsions followed by left hemiplegia which also lasted for a fortnight. No further complications took place except successive crops of lichen urticatus in the fourth week.

J. D. ROLLESTON.

Urticaria papulosa (*'Practitioner,'* 1914, XCIII, *p.* 820).—**H. W. Barber.**—The disease is frequently associated with the exudative diathesis and seems to have some connection with it. The exciting causes are gastro-intestinal, teething and external irritation. The eruption consists of urticarial and erythematous plaques, on which appear papules. The treatment consists of attention to the alimentary system by care to the teeth, a dose of calomel or hydr. c̄ creta at night, followed by a saline and rhubarb mixture during the next day. Liquid paraffin given regularly either pure or

in emulsion is valuable; intestinal antiseptics, especially ammonium sulphoichthyol, are effective. Phenolphthalein in petroleum emulsion (grs. x in ʒj) ʒij–ʒiv twice or thrice daily has done good in some cases; treatment of the nervous system by removal of sources of irritation as elongated prepuce, adenoids and tonsils; local applications: a warm bath at night followed by some soothing preparation as 2 per cent. β-naphthal ointment or zinc ointment with 10 per cent. menthol. In the periods of freedom from the eruption ung. glyc. phenol. subacetatis is of value.

F. R. B. Atkinson.

Dermatitis herpetiformis with tuberculous glands of neck (*'Lancet,'* 1914, II, *p.* 1247).—**W. J. Midelton.**—The patient was a girl, aged 9 years. She had been well up to the age of 3 years, but then developed scarlet fever. An eruption occurred after the original rash died away and was diagnosed as dermatitis herpetiformis. She had been free from the dermatitis from the beginning of August to the end of September 1911; then it recurred and persisted. Counter-irritation had been commenced at the end of February, 1912. At that time the pustules, blebs and scabs were well-marked, chiefly on the inner aspect of the upper third of the thighs and spreading on to the abdomen. Within three weeks she became well. Occasionally slight relapses of short duration had occurred since. About five years ago some tuberculous glands in the neck were operated on and sinuses persisted for over two years. These eventually healed well, but one scar remained bluish red and had whitish specks in it suggesting lupus vulgaris. In May 1913 she had a wound on the right wrist which became septic, but soon healed under treatment. In August 1913, one or two glands in the neck enlarged and one small abscess formed. This was incised, and complete healing took place in a few months. Other glands became inflamed, but no definite abscess occurred. This fact was, in the opinion of the author, significant as showing greatly increased resistance. No sign of the dermatitis has appeared for over eighteen months.

J. Allan.

Dermatitis herpetiformis and chronic bronchial catarrh (*'Lancet,'* 1914, II, *p.* 1248),—**W. J. Midelton** reports a case of dermatitis herpetiformis and chronic bronchial catarrh in a boy, aged 9 years. He had been treated by means of continuous counter-irritation commenced in August, 1912, and carried out once a week ever since. The treatment seemed to check the eruption and the boy's general health had much improved.

J. Allan.

The dietetics of eczema (*'Arch. of Ped.,'* 1915, XXXII, *p.* 175).—**G. D. Lyman** considers a complete examination of the stools should be made in all cases of eczema. In some cases cutting down of the food is all that is required, in others, feeding up; in others a complete change of food is necessary. In uncomplicated cases the fat and carbohydrate percentages are at fault; in some cases the salt assimilation is disturbed, in others, protein digestion is at fault.

F. R. B. Atkinson.

Lupus vulgaris (*'Dublin Journ. Med. Sci.,'* 1915, I, *p.* 302).—**C. M. O'Brien** at a meeting of the Royal Academy of Medicine in Ireland, showed a boy, aged 13 years, who had been suffering from a very pronounced form of lupus for the last nine years. Although it was very widespread the face was practically free; the mucous membranes were also unaffected. The form of disease was what is known as lupus non exedens. The patient had

been under treatment at the London Hospital for almost three years, getting one hour's exposure of Finsen light on five days of the week. Since October 1914, he had had three sittings per week of seventy minutes each. The case did not appear to be a victory for the Finsen light, the most that could be claimed was that it stopped the spread. A bacteriological examination of the case had been made, and a positive result had followed the inoculation of a guinea-pig with the lupus tissue. J. Allan.

Lupus pernio (*'Dublin Journ. Med. Sci.,'* 1915, i, *p.* 226).—**T. P. C. Kirkpatrick,** at a meeting of the Royal Academy of Medicine in Ireland, showed a boy suffering from a condition which was described as lupus pernio. The patient was affected for three years with sore hands, sore ears, and at one time had a similar affection of his face. The hands were said to be a great deal better now, but much thickening, swelling, and ulceration still remained. He was treated with emollients, and both hands were kept wrapped up. J. Allan.

A case of purpura fulminans (*'Gazz. d. Osp.,'* 1914, xxxv, *p.* 1910).—**O. Nicolussi.**—A female infant, aged 8 months, who had had no previous illness, was suddenly seized one morning with high fever and convulsions. The temperature kept high all day, and in the evening there appeared, first on the lower limbs and then on the face, trunk, and upper limbs, small reddish-blue spots which increased in number and size until the whole skin was covered. Death from collapse took place sixteen hours from the onset. There is no mention of a necropsy. J. D. Rolleston.

The control and treatment of scabies (*'Med. Pres.,'* 1914, ii, *p.* 404). —**F. Hauxwell** points to the difficulty of getting parents to carry out treatment at home, and gives an account of the routine procedure now adopted at St. Helens. (1) Suspected cases are submitted to the medical officer for examination; (2) slight cases and isolated cases occurring in families are advised regarding treatment, and in most cases it is found that directions given are carried out fairly well and the child recovers within a reasonable time; (3) in other cases the health visitor visits the home and inquires regarding the presence of other cases in the home, and reports on the general cleanliness of the premises; (4) if there appears no satisfactory means of home treatment, all cases are removed from the house to the sanatorium, the bedrooms are disinfected with formalin, and the bedding, clothing, etc. removed for steam disinfection; (5) should the house be in a filthy condition, it is dealt with under the Public Health Act, 1875, Section 120. From a six months' trial of this routine it has been found that admission to the isolation hospital gives the best results. J. Allan.

X-ray treatment of ringworm (*'Dublin Journ. Med. Sci.,'* 1915, i, *p.* 249).—**E. J. Watson** describes the technique employed and discusses his results in sixty-six cases of ringworm of the scalp treated with X-rays. He has found treatment with tincture of iodine very useful in preventing the spread of the disease until the action of the X-rays has had time to remove the disease by the falling out of the hairs. J. Allan.

Some manifestations of congenital syphilis (*'Glasgow Med. Journ.,'* 1914, ii, *p.* 401).—**L. Findlay** and **M. E. Robertson** recently carried out a research on some manifestations of congenital syphilis. They believe that the Wassermann reaction, at least in this country, is practically only found

in syphilis, and, if properly controlled, is a test of great diagnostic value. A condition of chronic eczema situated at the angles of the mouth, and invading the mucous membrane of the lips, is often of syphilitic origin. Congenital heart disease is not infrequently found in patients suffering from congenital syphilis, as evidenced by a positive Wassermann reaction. About 45 per cent. of cases of spastic diplegia and 60 per cent. of mental defectives also seem to be the subject of congenital syphilis, as evidenced by a positive Wassermann reaction. J. ALLAN.

Treponema pallidum found at autopsy in the blood-stream and elsewhere in a case of congenital syphilis (*'Am. Journ. Dis. Child.,'* 1915, IX, *p.* 126).—**H. C. Clark** and **I. N. Gates.**—A female infant, aged 2 months, was admitted to hospital with rhinitis and a maculo-papular eruption and died twelve hours after admission. Post mortem, the greatest number of treponemata were found in the liver, then in the kidneys, blood from the jugular vein, pancreas, skin and lungs in the order named. The other organs such as the spleen, thymus and brain, yielded sparse findings or in the case of the ovary, uterus, adrenals, voluntary muscles and aorta, none at all. The case showed all the conditions conforming to Colles' law. The mother at the time of the child's death and six months later showed no sign of the disease and gave a negative Wassermann's reaction, while the father who had contracted syphilis two years before the child's birth gave a positive reaction. J. D. ROLLESTON.

Early congenital bone lues (*'Arch of Ped.,'* 1915, XXXII, *p.* 244).—**J. R. Kuth's** conclusions are as follows: (1) Roentgen rays give direct evidence of the disease, and are of practical importance for diagnosis and pathology. (2) The disease is very prevalent and should be borne in mind. It affects chiefly the ends of long bones and is of two kinds; in one, the child is born with lues and in the other the manifestations appear some time after birth. The characteristic lesion is an osteo-chondritis.
F. R. B. ATKINSON.

Laboratory diagnosis in the early stages of congenital syphilis (*'Amer. Journ. Med. Sci.,'* 1914, CXLVIII, *p.* 688).—**C. G. Grulee** states that for all stages of the disease a positive Wassermann is of distinct value and a negative is of little use, since many cases of syphilis exist in which the blood gives no positive reaction. A positive reaction may occur in scarlet fever, and in one twin, but not in the other. The method does not give concordant results in mother and offspring. In thirty-four cases concordant results were only obtained in sixteen. The agreement is less when the mother's disease is florid (38·5 per cent.), than when it is old (60 per cent.). Where there is a disagreement the result is more often positive in the case of the mother. With regard to the cerebro-spinal fluid the globulin content, as evidenced by the Noguchi test, does not give a positive reaction in all cases, and when it is obtained it may be due to conditions other than syphilis. The Lange gold chloride method was also investigated by the author; it consists in the fact that certain albuminous bodies in cerebro-spinal fluid when brought in contact with a solution of colloidal gold cause a clumping of the smaller particles, producing various changes in colour and even precipitation. Positive results were obtained in the cerebro-spinal fluid of nine cases of typical congenital syphilis in dilutions of 1 in 40 and 1 in 80. In many of these cases the Noguchi and Wassermann tests of the cerebro-spinal fluid were

negative. Apparently a similar reaction is obtained in cases of pneumonia complicated by serous meningitis In spite of this the author concludes that the Lange test is a means of confirming the diagnosis in infancy.

CHRISTOPHER ROLLESTON.

Diagnosis and treatment of late hereditary syphilis (*'Amer. Journ. Dis. Child.,'* 1914, VIII, *p.* 283).—**B. S. Veeder** and **P. C. Jeans** describe 123 cases of manifest hereditary syphilis. Forty-nine, or 40 per cent., of these were infants under one year affected with rash, coryza and enlarged spleen, while the remaining 74 suffered from late lesions. In only 12 of the 74 was there a definite history of early infantile syphilitic affections. Eighty-three per cent. of the 74 were whites and 17 per cent. negroes. Twenty-three had been breast-fed and only 4 artificially fed. Interstitial keratitis was present in 17, or 23 per cent. The central nervous system was affected in 32, or 43 per cent. Five of 13 cases of hemiplegia reacted positively to Wassermann's test. Similar results were obtained in 2 cases of chorea which had no history or evidence of rheumatism. Hutchinson's teeth were only present in 3 out of 48 possessing permanent incisors. Typical Hutchinson's teeth and interstitial keratitis were, however, seen in a non-syphilitic patient, who reacted to tuberculin, but not to Wassermann's test. The acute cases were treated with three or four intravenous injections of neo-salvarsan, given at an interval of two or three days, and then with grey powder in gradually increasing doses. Old standing lesions such as keratitis or cerebro-spinal syphilis did not react to this treatment.

CHRISTOPHER ROLLESTON.

On the value of the luetin reaction in pædiatrics (*'Zeitschr. f. Kinderheilk.,'* 1915, XII, *p.* 239).—**J. C. Schipper,** Superintendent of the Emma Children's Hospital in Amsterdam, tested this reaction in twenty heredo-syphilitic children aged from 3 months to 15 years, and in fifty-four non-syphilitic children aged from 2 months to 11 years. He could not recommend the reaction for the following reasons: (1) It is not sufficiently reliable—in about 16 per cent. of syphilitic cases it is negative, and in 6 per cent. of non-syphilitic cases it is positive. (2) The test requires too much time—at least eight days. (3) The test requires more experience than can be obtained outside large hospitals and clinics. (4) The reaction is negative in wasted syphilitic children (with infiltrated skin or œdema) and often positive or doubtful in children with the exudative diathesis.

J. D. ROLLESTON.

Mongolian idiocy and syphilis (*'Journ. Amer. Med. Assoc.,'* 1915, LXIV, *p.* 1636).—**H. C. Stevens** inclines to the belief that there is a connection between Mongolian idiocy and syphilis. In a series of twenty cases he found that the Wassermann reaction on the blood-serum was positive in 10 per cent., and on the spinal fluid in 25 per cent. Pleocytosis was present in 20 per cent., and the globulin content was increased in 90 per cent. In 90 per cent. also the gold chloride reaction showed colour changes within the luetic zone.

T. R. WHIPHAM.

Hereditary syphilis as a social problem (*'Am. Journ. Dis. Child.,'* 1914, VIII, *p.* 327).—**P. C. Jeans** and **E. M. Butler** studied 108 cases of hereditary syphilis at the St. Louis Children's Hospital. Their conclusions are as follows: As a social problem, hereditary syphilis assumes relatively large proportions, one patient often representing a number of individuals needing treatment. Parents are frequently indifferent and fail to continue

treatment. In such cases Wassermann tests or treatment should be enforced. Hereditary syphilis is more frequent and its mortality is higher among the illegitimate than among the legitimate. Hereditary syphilis at St. Louis is two or three times as frequent in the coloured as in the white race, and its frequency is greater among infants than among older children. The waste in potential life by miscarriages and deaths in syphilitic families is twice as great as in non-syphilitic children. Thirty-three per cent. of the syphilitic children over one year had permanent disablement; 18 per cent. of the syphilitic children over one year had long-continued temporary disablement. There is about five times as much feeble-mindedness in syphilitic as in non-syphilitic families. The mortality for artificially-fed infants is five times as high as for breast-fed syphilitic infants, not including deaths from intestinal disturbance. J. D. Rolleston.

The use of neo-salvarsan in mental deficiency (*'Glasg. Med. Journ.,'* 1914, II, *p.* 241).—**L. Findlay,** as the result of an investigation in cases of mental deficiency, concludes that (1) syphilis is a frequent cause of idiocy; (2) in syphilitic idiocy there may be no luetic stigmata; (3) neo-salvarsan when introduced intravenously or intramuscularly has a very marked effect in improving the mental condition. In carrying out the research Wassermann's test was employed. Notes on four cases are given. J. Allan.

Review.

The Medical Annual: A Year Book of Treatment and Practitioner's Index, 1915. Thirty-third year. Bristol: John Wright & Sons, Ltd. Price 10s. net.

The outbreak of the war, though it has somewhat delayed the publication of this annual, has in no way affected its excellence. The contributors to the various branches of pædiatrics are the same as in previous years. Dr. F. Langmead gives a concise account of recent work on infantile diarrhœa, infant feeding and food disorders in children, congenital stenosis of the pylorus, inherited syphilis, tuberculosis in children, whooping-cough and other subjects. Dr. E. W. Goodall deals with the various infectious diseases. Other articles of pædiatric interest are those on poliomyelitis by Dr. Purves Stewart, rheumatic heart disease by Dr. Carey Coombs, and on gonorrhœal vulvo-vaginitis by Dr. C. F. Marshall. We note with pleasure that besides several of our abstracts from current literature and society reports, the following recent original articles in this Journal receive due notice and acknowledgment: Recurrent diarrhœa in children, intramuscular injections of antitoxin in diphtheria, relapsing pneumonia in children, paroxysmal tachycardia, acute *B. coli* infection of the urinary tract in children, salvarsan and neo-salvarsan in the treatment of hereditary syphilis, smallpox in infants and children, nervous complications of varicella, hæmorrhagic varicella, and tongue chewing.

The new articles in the work to which attention should be drawn are those on the new 'British Pharmacopœia' by Dr. F. J. Charteris, on modern naval surgery by Deputy-General A. Gascoyne-Wildey, R.N., on military surgery by Colonel Louis A. La Garde, U.S. Army, and on antiseptics in war and the method of their employment by Mr. G. Lenthal Cheatle. The present issue has been furnished with a new and more prominent type, which should be much appreciated by readers. J. D. R.